A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04B1/16 H04Q7/32

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $IPC \ 7 \quad H04Q \quad H04B$ 

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	
Χ	US 6 289 228 B1 (CORKE ROBERT J ET AL) 11 September 2001 (2001-09-11)	1,14	
<b>'</b>	column 7, line 5 - line 33 figures 2,3	1,3-6	
x	EP 1 328 066 A (FUJITSU LTD) 16 July 2003 (2003-07-16)	1,2,7,8,	
<b>'</b>	column 2, line 23 - line 27	14-16 10-13, 17-20	
	column 7, line 18 - line 40 figures 1,2	17-20	
X	EP 0 361 350 A (NIPPON ELECTRIC CO) 4 April 1990 (1990-04-04)	1,14	
1	column 1, line 25 - line 42 figure 3	2	
ļ	 -/		

Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
<ul> <li>Special categories of cited documents:</li> <li>"A" document defining the general state of the art which is not considered to be of particular relevance</li> <li>"E" earlier document but published on or after the International filing date</li> <li>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</li> <li>"O" document referring to an oral disclosure, use, exhibition or other means</li> <li>"P" document published prior to the International filing date but later than the priority date claimed</li> </ul>	<ul> <li>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</li> <li>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</li> <li>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>"&amp;" document member of the same patent family</li> </ul>
Date of the actual completion of the international search  11 November 2004	Date of mailing of the international search report $26/11/2004$
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswljk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nt,  Fax: (+31-70) 340-3016	Authorized officer  Avilés Martinez, L

Category °	ation) DOCUMENTS CONSIDERED TO BE RELEVANT  Citation of document, with indication, where appropriate, of the relevant passages	1
- Lancyony	onduon of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 104 937 A (FUJIMOTO SHIGERU) 15 August 2000 (2000-08-15) column 2, line 38 - line 56 column 4, line 2 - line 10 figure 1	1,14
Y	US 6 243 399 B1 (SMITH JOSEPH MARK ET AL) 5 June 2001 (2001-06-05) column 2, line 37 - line 43 column 5, line 26 - line 37 column 6, line 33 - line 39 figure 1A	2
Υ	US 6 600 907 B1 (TAGUCHI MOTOYASU) 29 July 2003 (2003-07-29) claim 5	3,10,17
Υ	US 6 259 724 B1 (ESMAILZADEH RIAZ) 10 July 2001 (2001-07-10) column 5, line 35 - line 41 figures 4,7	4,11,18
Y	EP 0 797 308 A (TSUBOCHI KAZUO) 24 September 1997 (1997-09-24) column 3, line 23 - line 27	5,6,12, 13,19,20
Y	US 6 532 228 B1 (BURGESS PAUL ET AL) 11 March 2003 (2003-03-11) column 1, line 7 - line 11 column 2, line 30 - line 39	
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tion o	n patent	family	members
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International Application No PCT/\_\_\_004/051596

5	PC1/2004/051596				
Patent document dted in search repo	ort	Publication date		Patent family member(s)	Publication date
US 6289228	B1 	11-09-2001	BR CN DE FR GB JP SG	0002978 A 1281319 A ,C 10035062 A1 2796795 A1 2354911 A ,B 2001069072 A 85200 A1	13-03-2001 24-01-2001 01-03-2001 26-01-2001 04-04-2001 16-03-2001 19-12-2001
EP 1328066	A	16-07-2003	JP CN EP US	2003209616 A 1433180 A 1328066 A2 2003133337 A1	25-07-2003 30-07-2003 16-07-2003 17-07-2003
EP 0361350	Α	04-04-1990	JP JP CA DE DE EP KR US	2087834 A 2805767 B2 1306013 C 68924027 D1 68924027 T2 0361350 A2 9310170 B1 5031231 A	28-03-1990 30-09-1998 04-08-1992 05-10-1995 25-01-1996 04-04-1990 15-10-1993 09-07-1991
US 6104937	A	15-08-2000	JP AU AU CA NL NL	9247035 A 720272 B2 1516297 A 2199441 A1 1005457 C2 1005457 A1	19-09-1997 25-05-2000 11-09-1997 08-09-1997 02-04-2002 09-09-1997
US 6243399	B1	05-06-2001	USS ATT AU DE	5666355 A 6775531 B1 2004147277 A1 225097 T 253785 T 225098 T 3130595 A 1096692 T1 1320249 T1 69528369 D1 69528369 T2 69528398 D1 69528398 T2 69532092 D1 69532092 T2 1096692 T3 1079592 T3 775388 T3 1079592 T3 775388 T3 1079530 A2 1083664 A2 1083665 A2 1083665 A2 1096692 A1 1079592 A2 1320249 A2 0775388 A1 2182751 T3 2208199 T3 2198229 T1 2182910 T3	09-09-1997 10-08-2004 29-07-2004 15-10-2002 15-11-2003 15-10-2002 22-02-1996 20-09-2001 27-11-2003 31-10-2002 22-05-2003 31-10-2002 22-05-2003 11-12-2003 19-08-2004 27-01-2003 28-02-2001 14-03-2001 14-03-2001 14-03-2001 18-06-2003 28-05-1997 16-03-2003 16-06-2004 01-02-2004 16-03-2003

Date of the second seco		PC1/		004/051596	
Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6243399	B1		FI FI	971731 A 20041115 A	23-04-1997
			FΪ	20041115 A 20041116 A	26-08-2004
			FΙ	20041110 A 20041117 A	26-08-2004
			FΪ	20041117 A	26-08-2004
			FΙ	20041119 A	26-08-2004
			FI	20041120 A	26-08-2004 26-08-2004
			HK	1031965 A1	19-03-2004
			HK	1033513 A1	13-06-2003
			JP	3130049 B2	31-01-2001
			JP	9511882 T	25-11-1997
			JP	2001119338 A	27-04-2001
			PT	1096692 T	31-01-2003
			PT	775388 T	28-02-2003
~			WO	9603811 A1	08-02-1996
US 6600907	B1	29-07-2003	JP	3199039 B2	13-08-2001
			JP	2000138654 A	16-05-2000
			CN	1254998 A	31-05-2000
			GB	2358773 A ,B	01-08-2001
			GB	2345416 A ,B	05-07-2000
US 6259724	B1	10-07-2001	AU	720313 B2	25-05-2000
			AU	4732397 A	15-05-1998
			BR	9711928 A	24-08-1999
			CA CN	2268668 A1	30-04-1998
		•	EP	1234169 A 0932996 A2	03-11-1999
•			JP	3471813 B2	04-08-1999
			JP	2001502866 T	02-12-2003
			KR	2000049151 A	27-02-2001
			RU	2213430 C2	25-07-2000 27-09-2003
			WO	9818280 A2	30-04-1998
EP 0797308	Α	24-09-1997	JP	3299885 B2	08-07-2002
			JΡ	9261771 A	03-10-1997
			DE	69714634 D1	19-09-2002
			DE	69714634 T2	24-04-2003
			EP	0797308 A2	24-09-1997
			KR	222482 B1	01-10-1999
			US 	5995806 A	30-11-1999
US 6532228	B1	11-03-2003	GB	. 2342009 A	29-03-2000
			AU	6466099 A	10-04-2000
			DE	69919553 D1	23-09-2004
			WO EP	0018072 A1	30-03-2000
				1116363 A1	18-07-2001